ABSTRACT OF THE DISCLOSURE

A radio frequency power amplifier circuit according to certain embodiments of the present invention uses a distributed radio frequency amplifier 110 having a plurality of stages each with an input. The distributed radio frequency amplifier 110 drives an output load, such as an antenna 114. A drive signal synthesizer 106, having a plurality of outputs, drives the plurality of inputs to the distributed amplifier 110. Changes in load impedance are measured, e.g., using a directional coupler 160, and the measurement is used to change a drive signal produced by the drive signal synthesizer 106 to compensate for the change in load impedance.